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ABSTRACT

This report describes the design-down process of defining educational specifications that includes recognition of societal changes and community involvement when building or renovating schools. A progressive, collaborative step-by-step approach is described through which the design team moves in the development of a school building design. Each step described enables the team to work through all the elements of the design process quickly while allowing ideas that are held in common to surface and keeping track of unresolved issues and questions for follow-up efforts. The process ensures that the learning signature (the school's uniqueness) and learning expectations are keystone specifications, the base from which all the others are to be derived and rationalized. (GR)

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The Design-Down Process

Topic : The Design-Down Process: An Alternative to the Traditional Education Specification Process for Defining Learning Environments

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INTRODUCTION

There is a growing emphasis on integration and inclusion in education today, an emphasis which expands our view of educational environments to one which is more holistic and includes the community as part of the learning environment. Defining the learning environment using the traditional education specification process has worked well for the past forty years, mainly because it is an effective tool to plan and design schools when what goes on in education is predictable and within a narrow range of change. A process which relies heavily on input from only educators, e.g., teachers and administrators, it is typically organized by discipline, placing the focus on the teacher.

As broad changes are taking place in education to meet societal needs, however, we must enhance our design and planning methods to address those changes. Based on the authors' research, *"New Designs for the Comprehensive High School"* (CEFPI Educational Facility Planner, Vol. 31, No. 1, 1993), and other important studies and documents such as NASSP's *Breaking Ranks: Changing an American Institution*, the design-down process is one which is being used by school districts from coast to coast. Applications of the process are varied and at different levels of development. Situations range from building new schools, to restructuring existing schools, to using alternative settings. Concepts are being adopted in full or in part, depending upon each district's unique vision. And while the authors' research and predominant focus has been on high schools, the process is applicable at any educational level. The question for educational facility professionals, then, is how does the design-down process really differ from the education specification (ed specs) process?

DIFFERENCES IN THE PROCESSES

The *design-down* process expands the traditional *ed specs* approach by enlarging the scope of the process. Societal issues related to the dynamics of community, family, and work become the starting point for this expanded process. Here, the focus is on the learner as opposed to the teacher, and the process requires an alignment of the various elements, something which, while possible using the *ed specs* approach, is not integral to the process. And finally, the design-down process looks at connections among the disciplines before looking at the disciplines themselves. The purpose of the design-down process is not one of "throwing the baby out with the bath water" but rather to significantly expand the way we make decisions about learning environments to serve the best educational practice in a rapidly changing

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society.

APPROACH

Using the design-down process to create the framework of Learning Specifications which guides the development of the educational program and facilities for a school district, a design team is required to move sequentially through a series of design phases, each phase building on the decisions of the previous ones. The phases are:

Learning Context
Learning Signature
Learning Expectations
Learning Process
Learning Organization
Learning Partnerships
Learning Staff and Staff Development
Learning Environment
Learning Celebration
Learning Finance.

This *design-down* work, where each step is followed by a revisiting or recycling through the earlier phases, encourages open discussion and consensus among members, helping to develop a coherent set of specifications for all aspects of the design. Enabling a design team to move through all elements of the design work in a relatively short amount of time, the process also encourages the team to identify ideas held in common while helping them keep track of unresolved issues and questions for follow-up efforts in the later phases of the design work.

Methods for bringing forward pertinent written materials are part of the process. Team members are asked to seek out information on a topic, issue, or existing program to aid in overall information gathering so that within the time and resources of the project, staff can locate and share the identified information. The process also facilitates the timely reporting of the design team's work. Typically, reporting is available in two forms—a written document and a computer-generated presentation.

The design-down process ensures that **the learning signature and learning expectations are keystone specifications, the base from which all the others are to be derived and rationalized**. This strategy calls into question all traditional assumptions about designing schools which are not consistent with the design specifications of a prior phase. Ultimately, every phase is interactive with each new phase added, bringing out additional perspectives and dimensions from previous phases. At times, a previously drawn specification will be modified as new insights are gained.

A project process typically calls for developing the new design specifications in close collaboration with practicing teachers, students, administrators, and other support staff as well as state education officials, teacher educators, policy makers, and community representatives. There are two strategies to implement this expectation—an advisory design group with broad representation and focus groups selected to help with specific phases of the design.

DESIGN PROCESS

The design-down process now has been demonstrated at over 200 professional conferences, workshops, and school sites across the United States and in several other countries. In addition to its use with high schools, the design process also has guided the planning processes of elementary and middle schools and institutions of higher education. Drawing from these experiences, the design process is described in the following sections. It is assumed that the design process will be facilitated by a design group which is broadly representative of the stakeholders in the school system, e.g., parents, students, teachers, counselors, administrators, school board members, and representatives from business, industry, labor, and from community-based organizations.

Learning Context

This phase of the process focuses specifically on recognizing and reinforcing the need to tailor the design of education to the local situation. During this time, the team surfaces unique assets, problems, opportunities, and goals of the school under consideration. The product of the Learning Context segment is usually in the form of a set of design criteria which serves to guide and monitor the remaining elements of the design process.

Learning Signature

Here the focus is on what is to be special and unique about the school under design. While most school planning processes include attention to such components as mission, vision, values, and logo, these individual components are rarely linked together into a compelling, vivid, and highly meaningful signature for the school. A shared signature for the school is developed from personal signatures through sharing, dialogue, reflection, compromise, and consensus seeking. For example, the learning signature for one newly designed school with an environmental studies focus was a "*living wall*" containing plants from all over the world; another learning signature was a "*social gathering place*" for a K-12 school involving a partnership of nine districts using a major city's downtown area for a learning setting.

Learning Expectations

This phase addresses what is promised in terms of graduation requirements for students. Learning expectations typically include statements requiring the student to be a self-directed learner, collaborative producer, and a critical thinker. These can also include more detailed standards.

Learning Process

Concerning the design specifications for curriculum, instruction, and assessment, this phase moves from learning expectations directly into the identification of learning products to be used as evidence that learning expectations have been achieved. Learning projects should result in a natural integration of general and vocational education, strategically linking assessment, curriculum, and instruction in such a way that they are not artificially separated. This results in assessment which is continuous, curriculum which is interdisciplinary, and instruction which becomes more "*constructive*" as learners are involved in knowledge production or the "*construction*" of their own knowledge base. This also leads to a coherent curriculum.

Learning Organization

The aim of this segment of the design process is to determine how best to organize the time schedule, learners, staff, learning process, decision making, technology, and learning settings to support the learning process described above. Collectively these begin to define the school climate.

Learning Partnerships

At this stage, the focus moves to identifying who needs to be involved in making the learning organization and the learning process work to achieve the learning expectations. Through experience, we now place added attention on identifying the many partners (both internal and external) who are needed, the desired characteristics of those partners, and the various resources and services which might be shared, including those which may emanate from the school to be shared with the external partners. Schools are encouraged to develop written agreements with their partners, to make the partnerships very real, not simply paper transactions, and to give their partners recognition.

Learning Staff and Staff Development

As with learning partnerships, special attention is directed toward identifying the make up of the learning staff and their desired features. Within this context, learning staff also includes the consideration of learning teams as well as individuals. Students are emerging as an important part of the learning staff, particularly as the importance of learning projects and informal learning gain significance to a new designs school. Staff development begins by considering what is needed now, what is needed on a continuing basis, and then shifts to ask who is in the best position to provide effective staff training.

Learning Environment

This phase of the design process includes attention to technology, equipment, and facilities. Here it is recognized that the learning environment extends well beyond the school building to include all the learning settings used by learners, e.g., work-based, home, public library, community. More and more attention is being focused on smaller learning environments which are placed strategically around the community. This strategy supports the best use of partnerships, ensures that the learning is rigorous and relevant through the close blending of school and community, and provides each learner a virtual learning environment via computer networking. The result is a change in the concept of what is school.

Learning Celebration

The Learning Celebration is a new element of the new designs process. It has become apparent in our work that many of our old traditions for celebrating learning need to be revised. They must be refocused to bring recognition of and reinforcement to the changes in learning and in school operations now being recommended by the new designs specifications. While the learning celebration must reinforce the design specifications for all elements of the design process, it is critical that the products of this phase reinforce those of the learning signature and learning expectations. For example, if the signature focuses on a "*gathering place*," the celebration clearly must involve social activities which bring people together. If a key expectation is for the student to be a collaborative problem solver, then celebration must include attention to group work.

Learning Finance

Rather than look at the dollars early in the process, it becomes the last step in the design-down approach for a specific reason. It is important not to shut off the flow of discussion and creative ideas early in the process which is exactly what happens when a design team rushes to plug in dollar figures too soon. This should not be construed as a message that dollars are not important for they are. They most certainly must be addressed in very real terms. But it is important to remember that within the overall design-down process, the sequencing must be maintained. This segment includes attention to both costs (expenditures) and revenues for bringing the new or restructured school into place and supporting its continued operation. Our on-going goal is to bring the new designs school into place and to operate it for no more than an average existing school. Cost considerations involve trade-offs among technology, staffing, and partnership along with other features, a situation which invites exploration of creative new roles for the school to play as a part of the social and economic development plans for a community.

CONCLUSION

Society is changing rapidly and education is being challenged to follow suit. As we expand our knowledge of how we learn, we also must expand our concept of what constitutes a stimulating and creative learning environment. It remains the authors' contention that the single most difficult task in this transformative process is that of altering the public's image of a school facility—of what it looks like, what its functions are, where it is located, etc. And make no mistake that the word "*public*" includes many school administrators and staff members, teachers, and educational facility professionals as well. Whatever our profession, we all have a tendency to operate based on our own personal experiences and assumptions of what "*school*" should be, do, and look like. Expanding the planning and design process from the traditional ed specs approach to incorporate the societal issues of the day makes sense. The design-down process, with its learner-centered focus and collaborative approach, builds and supports community linkages, an important step in the transformation strategy.

SIDEBAR

RELATED CONCEPTS

Typical Design Team's View of the Ideal Function of Education

- Appropriate education needs to prepare students for success in work, family, and community settings.
- Education should meet the needs of all students with high quality instruction and standards.
- Learning needs to be relevant and applicable to real life experiences.

Ideas to Obtain General Acceptance of Study Recommendations

- Involve stakeholders in the design process.
- Tailor or customize recommendations to local unique situations.
- Build on the strengths of what there is now and address areas of particular need.

Preferred Channels of Communication

- Direct contact with project management.
- Consensus-seeking meetings with the design group.
- Individual and small group interviews with key stakeholders.
- Timely meeting summaries and reports.

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